

## **Spectral analysis of lbv stars in m31: Af and and Var 15**

Valeev A., Sholukhova O., Fabrika S.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### **Abstract**

Copyright © International Astronomical Union 2015. We study spectra of two bona fide LBV stars in M31: AF And and Var 15. The spectra were obtained with the 6-m telescope (Russia) from 2005 to 2012. The model spectra were calculated with the CMFGEN code. We have not found strong changes in the spectra of the LBV stars in that time interval, however a certain variability has been detected. We estimate the star and wind parameters, such as luminosity, temperature, radius, mass loss rate, escape velocity, hydrogen content, and reddening. We study the stars on the Hertzsprung-Russell diagram and find their initial masses using evolutionary tracks by Meynet et al. (1994).

<http://dx.doi.org/10.1017/S1743921314006607>

---

### **Keywords**

individual (AF And, Var 15)